PROTEIN SEQUENCE SIGNALS AND THEIR APPLICATIONS

ABSTRACT OF THE DISCLOSURE

Just as written languages appear random unless one knows the words, so too protein sequences can appear as random. By statistical measures they are far from random. Protein sequences contain nonrandom signals. Some signals are associated with structure and function. Methods to search for and identify such signals are provided. Two amino acid classes and the characteristics of their signals are described. Protein sequences are transformed into symbols using these classes and other sets of amino acids. Signals are identified from these symbols. Signal analysis has many applications. As an example, conserved signal patterns across different protein families are used to predict fold of query sequences.

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